10-3930-232-10

TM 10-3930-232-10

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S MANUAL

TRUCK, LIFT, FORK, GASOLINE, PNEUMATIC TIRED WHEELS, 6000-LB CAPACITY,

ALLIS-CHALMERS MODEL FP60-24PS

ARMY MODEL MHE0183

FSN 3930-958-3684

This reprint includes all changes in effect at the time of publication; change 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY

JANUARY 1964

D 161.11:

READEX FICHE best copy available

SAFETY PRECAUTIONS

BEFORE OPERATION

When servicing battery, do not smoke or use flame in the vicinity. Batteries generate hydrogen, a highly explosive gas.

Check to be sure there is sufficient engine coolant and engine lubricant before starting the engine.

Do not fill fuel tank while engine is running. Provide metallic contact between the fuel container and fuel tank to prevent a static spark from igniting the fuel.

Do not remove the radiator cap from an overheated radiator; stop engine and allow radiator to cool before removing cap to avoid injury by scalding. Allow the engine to cool before filling the radiator, otherwise there is danger of cracking the cylinder head or block.

Check equipment logbook for record of proper servicing and maintenance.

DURING OPERATION

Do not shift directional shift lever while truck is in motion.

Be alert for other workers to be sure they are not in the way of the load or the moving truck

Be sure there is sufficient clearance overhead and on each side of the truck.

Always travel with the mast tilted back and with forks raised just high enough to clear any uneven floor conditions.

Avoid sudden starting and stopping of the truck. Reduce speed when making a turn.

Face in the direction of travel.

Know the rated capacity of the truck and do not overload it. Never pick up a load until certain it can be carried safely.

Make sure the load is steady before lifting it and keep the load against the carriage backrest.

When transporting bulky loads, travel in reverse. Always descend ramps in reverse when carrying a load.

When unloading a heavy elevated load, position the load directly over the unloading spot, as low as possible before tilting the mast forward.

Be very careful when high-tiering.

Do not butt loads with the forks or with the rear of the truck.

Report any evidence of faulty truck performance.

AFTER OPERATION

Make sure forks are lowered to the ground and handbrake is engaged firmly.

If engine cooling system or any lubricating oil sump is drained, make certain appropriate warning tags are attached to the steering handwheel.

If the truck is parked on an incline, block at least two wheels in the event of handbrake failure.

TM 10-3930-232-10
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CHANGE
NO. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *22 April 1974*

Operator's Manual

TRUCK, LIFT, FORK; GASOLINE; PNEUMATIC TIRED WHEELS 6000 LB CAPACITY (ALLIS-CHALMERS MODEL FP 60-24PS, ARMY MODEL MHE-183) FSN 3930-958-3684

TM 10-3930-232-10, 9 January 1964, is changed as follows:

Inside Front Cover. Add the following warning to the list of safety precautions:

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel. Wear ear muffs or ear plugs which were fitted by a trained professional.

Page 3. Paragraph 2 is rescinded.

Paragraph 4 is superseded as follows:

4. Recommendation for Maintenance Publications Improvements

You can help to improve this manual by calling attention to errors and by recommending improvements. Your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) should be mailed direct to Commander, US Army Troop Support Command, ATTN: AMSTS-MPP, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished direct to you.

Page 11. Immediately after Section III title, add the following warning:

WARNING

Operation of this equipment presents a noise hazard to personnel in the area. The noise level exceeds the allowable limits for unprotected personnel. Wear ear muffs or ear plugs which were fitted by a trained professional.

Page 18. Appendix I, References, add the following: "TB MED 251, Noise and Conservation of Hearing" and "TM 38-750, The Army Maintenance Management System (TAMMS)".

Page 19. Appendix II is superseded as follows:

*This change supersedes C 2, 20 March 1973.

APPENDIX II
BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST

Section I. INTRODUCTION

1. Scope

This appendix lists items required by the operator for operation of the fork lift truck.

2. General

This list is divided into the following sections:

a. Basic Issue Items List – Section II. (Not applicable).

b. Items Troop Installed or Authorized List – Section III. A list of items in alphabetical sequence, which at the discretion of the unit commander, may accompany the fork lift truck. These items are NOT subject to turn-in with the fork lift truck when evacuated.

3. Explanation of Columns

The following provides an explanation of columns in the tabular list of Basic Issue Items List, Section II, and Items Troop Installed or Authorized, Section III.

a. Source, Maintenance and Recoverability Code (SMR). Not applicable.

b. Federal Stock Number. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. This column indicates the Federal item name and any additional description of the item required.

d. Unit of Measure (U/M). A two character alphabetic abbreviation indicating the amount or quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Furnished With Equipment (BIIL). Not applicable.

f. Quantity Authorized (Items Troop Installed or Authorized). This column indicates the quantity of the item authorized to be used with the equipment.

Section III. ITEMS TROOP INSTALLED OR AUTHORIZED LIST

Federal stock number	Description	U/M	Qty auth
7520-559-9618	CASE, Maintenance and operational manual	EA	1
4210-889-2221	EXTINGUISHER, Fire	EA	1

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:
VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-25A, (qty rqr block No. 893) Operator maintenance requirements for Warehouse, Equipment.

TECHNICAL MANUAL
No. 10-3930-232-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *9 January 1964*

OPERATOR'S MANUAL

TRUCK, LIFT, FORK, GASOLINE PNEUMATIC-TIRED WHEELS 6,000-LB CAPACITY ALLIS-CHALMERS MODEL FP60-24PS ARMY MODEL MHE-183 FSN 3930-958-3684

		Paragraph	Page
CHAPTER 1.	INTRODUCTION		
Section I.	GENERAL		
	Scope	1	3
	Appendixes	2	3
	Forms, records, and reports	3	3
	Reporting of equipment manual improvements	4	3
	Orientation	5	3
II.	DESCRIPTION AND DATA		
	Description	6	3
	Tabulated data	7	3
CHAPTER 2.	OPERATING INSTRUCTIONS		
Section I.	SERVICE UPON RECEIPT OF TRUCK		
	General	8	8
	Responsibilities	9	8
II.	CONTROLS AND INSTRUMENTS		
	General	10	8
	Controls	11	8
	Instruments	12	10
III.	OPERATION UNDER USUAL CONDITIONS		
	General	13	11
	Starting the truck	14	11
	Driving the truck	15	11
	Picking up the load	16	11
	Depositing the load	17	11
	Stopping the truck	18	12
IV.	OPERATION OF EQUIPMENT USED IN CONJUNCTION WITH THE TRUCK		
	General	19	12
	Operating the Extinguisher	20	12
CHAPTER 3.	MAINTENANCE INSTRUCTIONS		
Section I.	SPECIAL TOOLS AND EQUIPMENT		
	Special tools	21	13
	Equipment	22	13
II.	LUBRICATION		
	General	23	13
	Operator responsibilities	24	13
III.	PREVENTIVE MAINTENANCE SERVICES UNDER USUAL CONDITIONS		
	General	25	13
	Daily preventive maintenance services	26	13

		Paragraph	Page
IV.	PREVENTIVE MAINTENANCE SERVICES UNDER UNUSUAL CONDITIONS		
	General	27	16
	Operation in extreme heat	28	16
	Operation in extreme cold	29	16
	Operation on sandy terrain	30	16
	Operation in tropical areas	31	16
V.	TROUBLESHOOTING		
	Definition	32	16
	Operator responsibilities	33	16
CHAPTER 4.	DEMOLITION OF TRUCK		
	Authority	34	17
	Methods	35	17
APPENDIX I.	REFERENCES	----	18
II.	BASIC ISSUE ITEMS LIST AND MAINTENANCE AND OPERATING SUPPLIES	----	19

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual is for the use of personnel responsible for the operation and first-echelon maintenance of the Truck, Lift, Fork, Gasoline, Pneumatic-Tired Wheels, 6,000-Pound Capacity, Allis-Chalmers Model FP60–24PS, Army Model MHE–183.

b. It provides the operator with the necessary instructions to operate the truck and to perform his required maintenance services. These maintenance services have been assigned to the operator within the limits of the daily preventive maintenance services (par. 26).

2. Appendixes

Appendix I is a list of current references, and appendix II is the basic issue item list and maintenance and operating supplies.

3. Forms, Records, and Reports

The forms, records, and reports applicable to the operation and first-echelon maintenance of this truck are listed and described in TM 38–750.

4. Reporting of Equipment Manual Improvements

The direct reporting by the individual user of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9) will be used for reporting these improvements. This form will be completed in triplicate, using pencil, pen, or typewriter. The original and one copy will be forwarded direct to the Commanding Officer, U.S. Army Mobility Support Center, ATTN: SMOMS–MM, P.O. Box 119, Columbus, Ohio 43216. One information copy will be provided to the individual's immediate supervisor (e.g., officer, noncommissioned officer, supervisor, etc.).

5. Orientation

Throughout this manual, the use of the terms right, left, front, and rear, with respect to engine and truck, indicates directions from the viewpoint of the operator sitting in the seat of the truck.

Section II. DESCRIPTION AND DATA

6. Description

Army Model MHE–183 (Allis-Chalmers Model FP60–24PS) is a nontactical forklift truck designed for out-of-doors operation. This truck (figs. 1 through 4) can be used to load, transport, unload, and stack loads weighing as much as 6,000 pounds at a load center of 24 inches and can lift the load to a height of 168 inches. (The load center is measured from the heel of the forks.) The truck is powered by a six cylinder, in-line, four-stroke cycle, valve in head, liquid cooled, gasoline engine and is equipped with power assist brakes, power steering and a single-speed, automatic transmission.

7. Tabulated Data

a. Capacities.

Cooling system	16 qt.
Crankcase (with filter)	7 qt.
Differential	15 pt.
Fuel tank	14.5 gal.
Hydraulic system:	
Filters and Lines	3 qt.
Tank	7.5 gal.
Oil filter	1 qt.
Transmission	10 qt.
Wheel hubs (planetary)	4 pt. each

b. Dimensions and Weight.

Ground clearance (at base of mast)	6 in.
Height:	
With uprights extended	206 in.
With uprights retracted	109¾ in.
Length:	
Forks	40 in.
Fork spread (maximum)	48 in.
Overall truck	12 ft. 4 in.
Weight	10,230 lb.

c. Performance.

Aisle width (minimum):	
Intersecting	7 ft. 8½ in.
Right angle stacking	16 ft. with 48 in. long load
Lift height (maximum)	168 in.
Load capacity (maximum)	6,000 lb.

Maximum speed (loaded):	
Forward	12 mph
Reverse	12 mph
Number of speeds:	
Forward	1
Reverse	1
Tilt limitation:	
Backward	10°
Forward	3°
Turning radius:	
Inside	22¾ in.
Outside	8 ft. 2 in.

d. Tires.

Number	6
Pressure:	
Drive (10 ply)	85 psi
(12 ply)	100 psi
Steer	85 psi
Size:	
Drive	7.50–15, 10 ply rating
Drive (Optional)	7.50–15, 12 ply rating
Steer	7.50–10, 10 ply rating

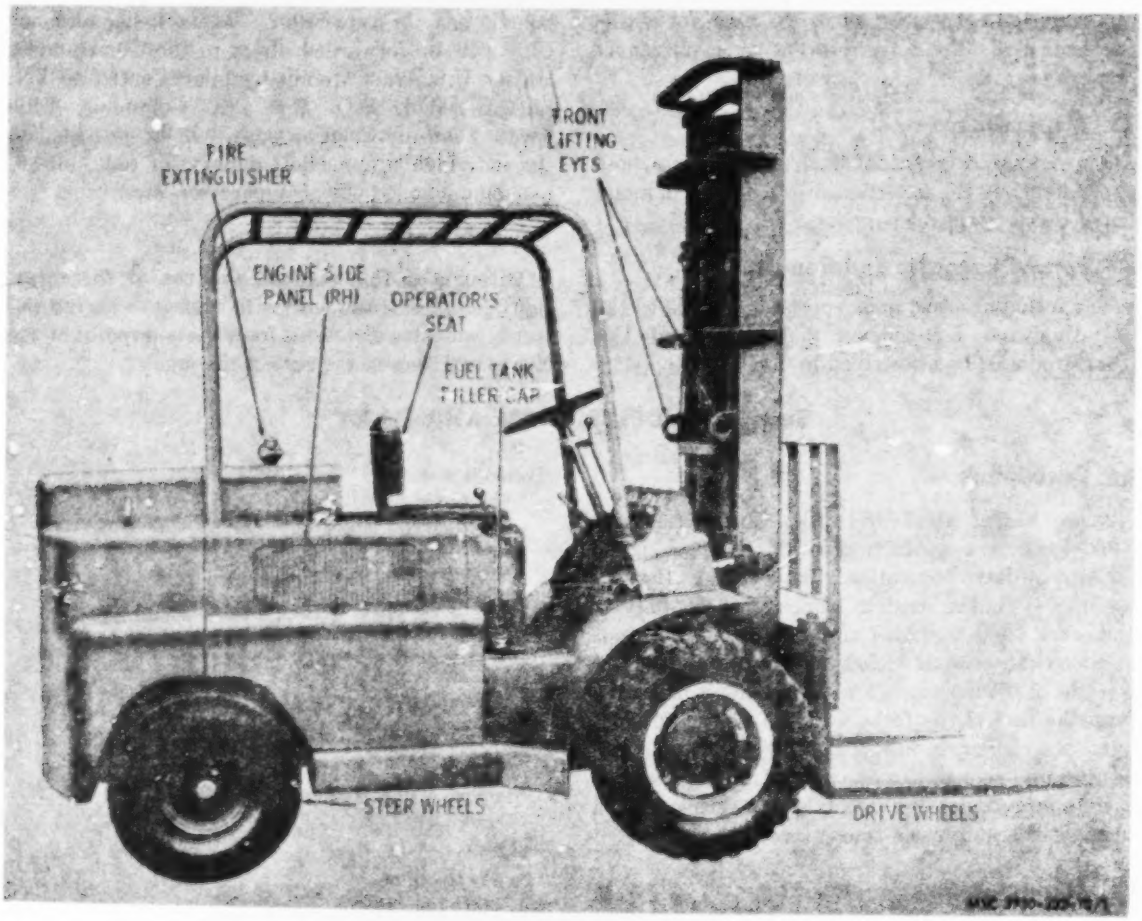


Figure 1. Truck, right side view.

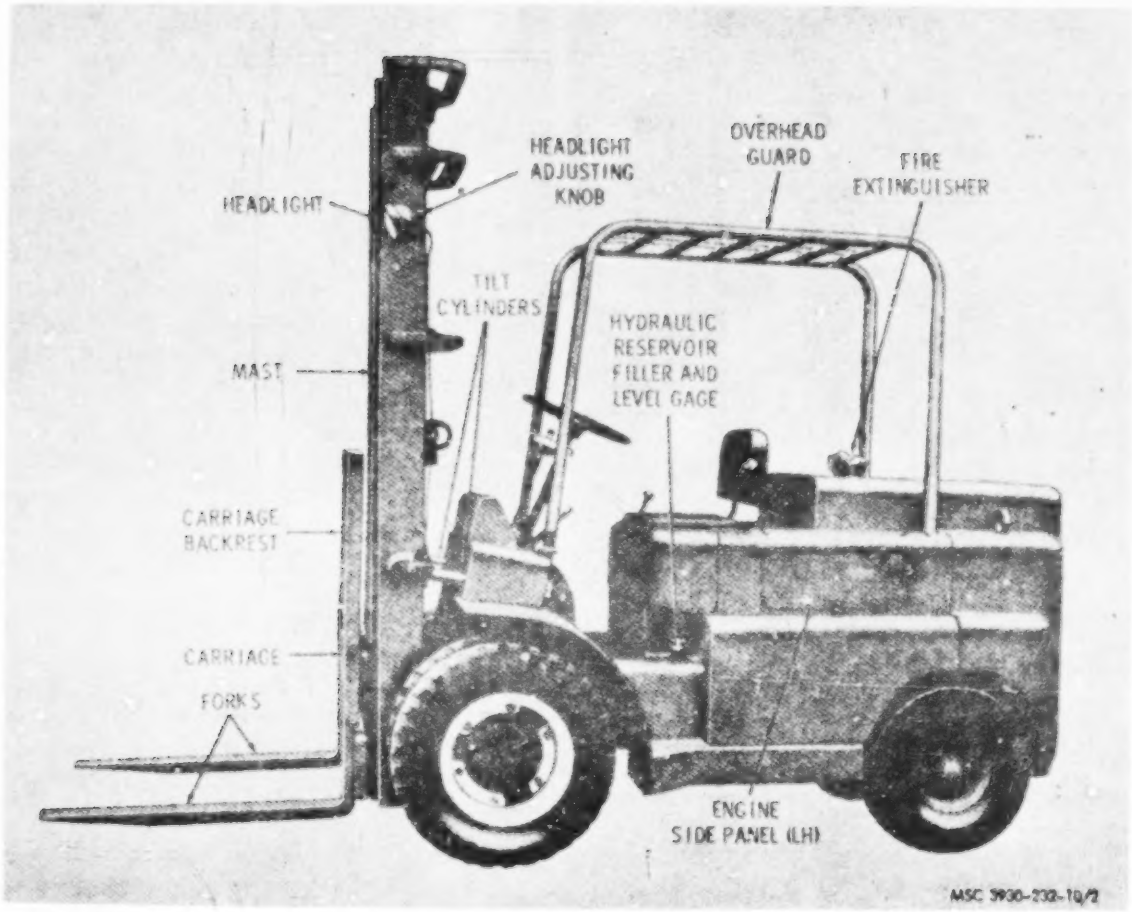


Figure 2. Truck, left side view.

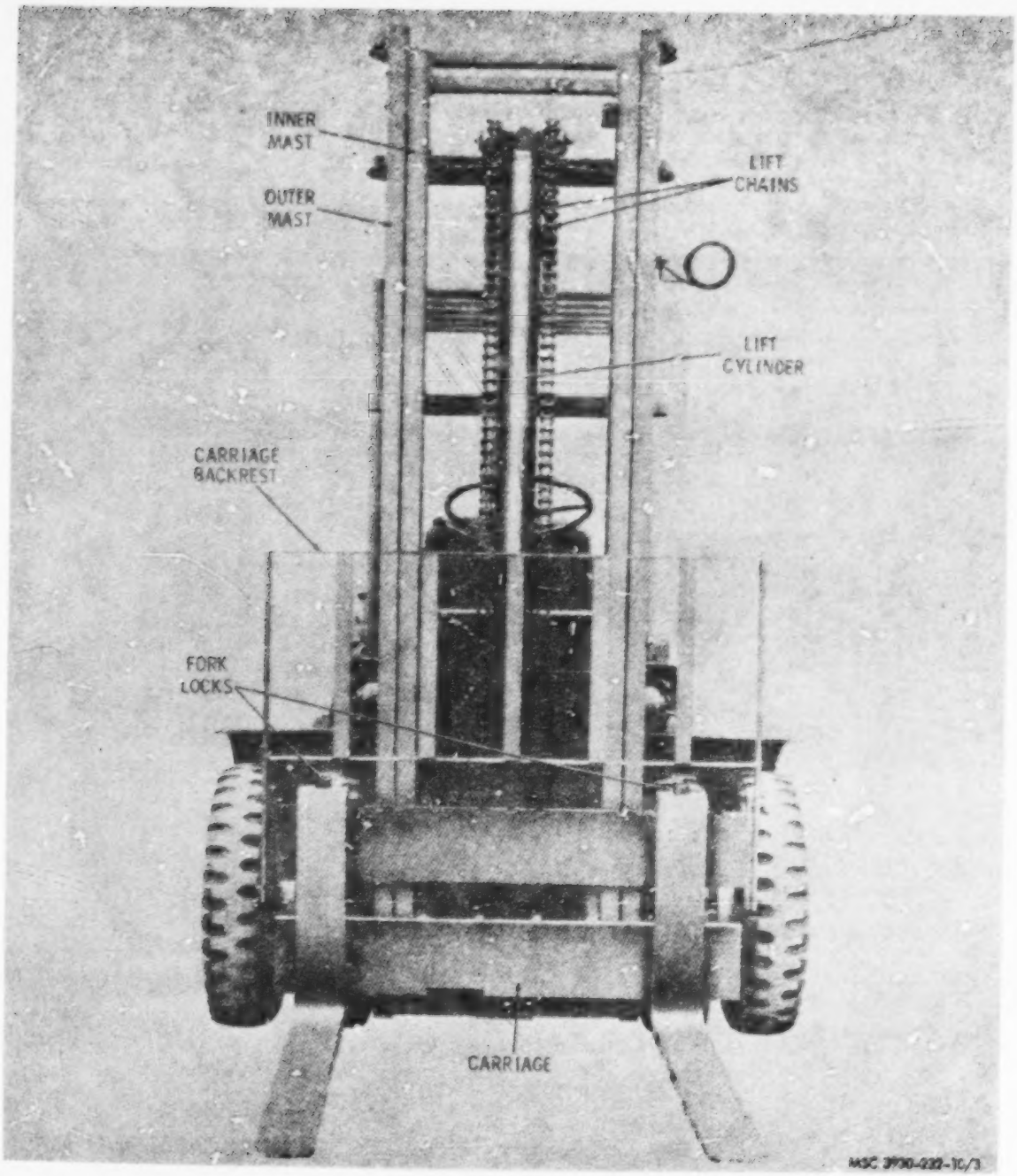


Figure 3. Truck, front view.

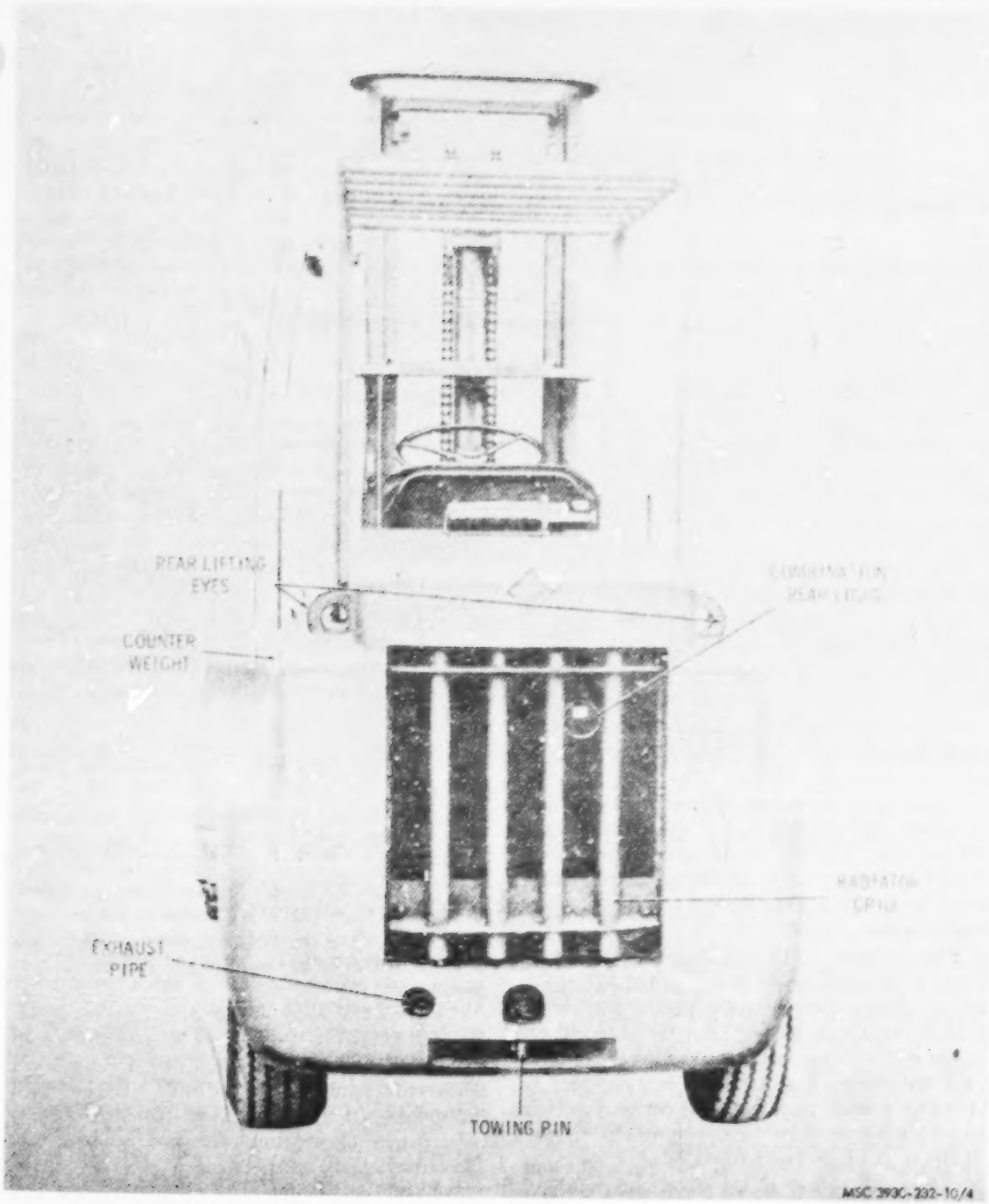


Figure 4. Truck, rear view.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF TRUCK

8. General

When a new or used truck is received by an organization, it must be serviced to prepare it for operation.

9. Responsibilities

The services performed upon receipt of the truck are the responsibility of the using organization and will be performed by second-echelon maintenance personnel. The operator will assist in these services when directed to do so by the commanding officer.

Section II. CONTROLS AND INSTRUMENTS

10. General

This section furnishes the operator with illustrations and sufficient information concerning the location and the use of the various controls and instruments to properly operate the truck.

11. Controls

a. Starter and Ignition Switch. The starter and ignition switch (13, fig. 5) is located on the instrument panel, to the right of the steering column. This is a three-position switch. Turn the switch clockwise to the START position to activate the starter solenoid which in turn will cause the starter motor to crank the engine. (The direction shift lever must be in the neutral (N) position.) Release the switch after starting and it will return to the IGN position. Turn the switch counterclockwise to the OFF position to shut off the supply of electric current to the ignition system and to the electrically operated gages.

b. Choke Control. The choke control (3, fig. 5) is located on the instrument panel, to the left of the steering column. The normal operating position for the choke control is pushed in as far as it will go. Pull out on the choke control to close the choke valve in the carburetor when starting a cold engine. As the engine warms, push in on the choke control as required to insure smooth engine operation.

c. Horn Button. The horn button (5, fig. 5) is located in the center of the steering handwheel. Depress the button to sound the horn.

d. Handbrake Lever. The handbrake lever (1, fig. 5) is mounted on the inside of the left-hand side panel, just to the rear of the instrument panel. Pull back on the lever to apply the brake and hold the truck in a stationary position. Move the lever forward to release the brake.

e. Steering Handwheel. The steering handwheel (6, fig. 5) controls the direction of travel of the truck. Turn the handwheel to the right (clockwise) to move the truck to the right; turn the handwheel to the left (counterclockwise) to move the truck to the left.

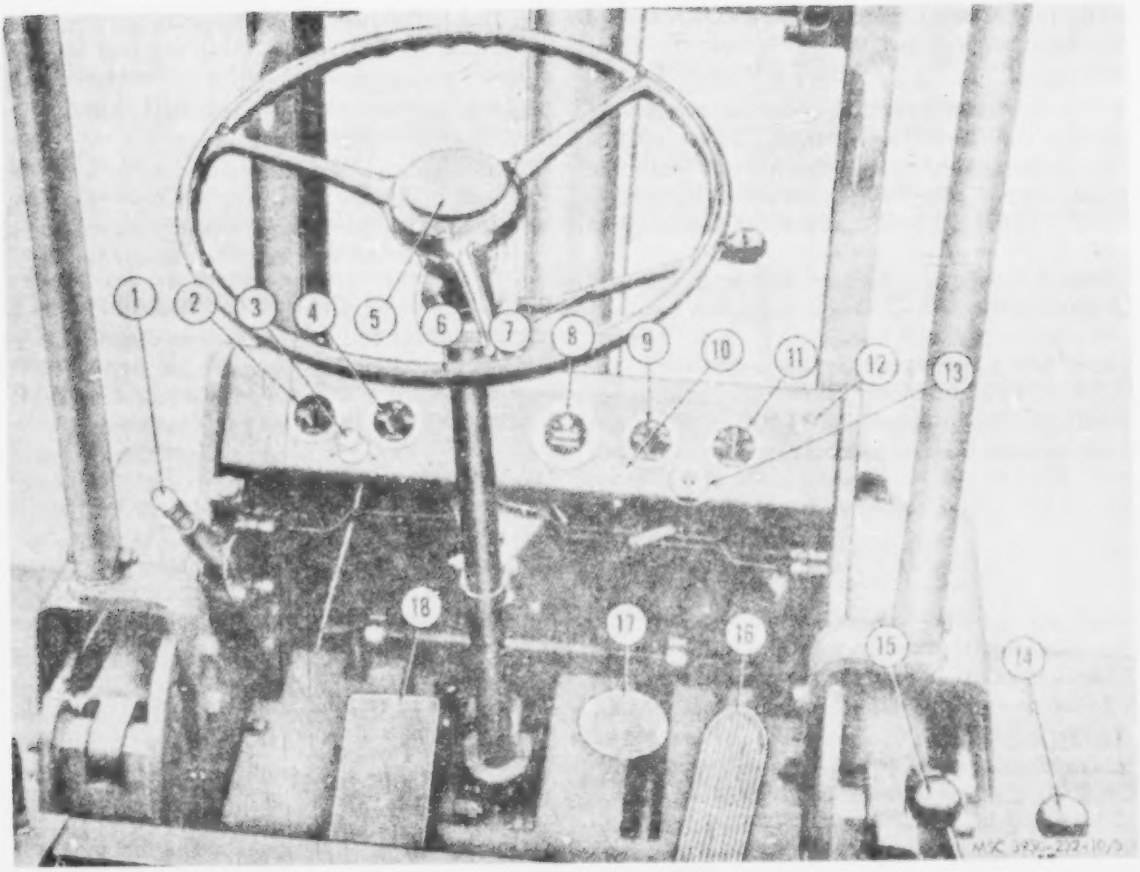
f. Accelerator Pedal. The accelerator pedal (16, fig. 5) is located on the floorboard, convenient to the operator's right foot. Depress the pedal to increase the engine speed; release the pressure on the pedal to decrease the engine speed.

g. Light Switch. The light switch (10, fig. 5) is located on the right side of the instrument panel, just above the ignition switch. Pull out on the light switch to turn on the headlight and the taillight. Push in on the light switch to turn off the headlight and taillight.

h. Headlight Adjustable Bracket Knob. An adjustable bracket knob (fig. 2) is attached to the headlight assembly. Move the knob up, down, to the right, or to the left to beam the headlight in each of those directions.

i. Lift Control Lever. The lift control lever (15, fig. 5) is located to the right of the operator's seat. Move the lever to the rear to lift the forks. Move the lever forward to lower the forks. Engine speed determines the lift rate. The lowering rate is regulated by the control valve and is in no way affected by engine speed.

j. Tilt Control Lever. The tilt control lever (14, fig. 5) is located to the right of the operator's seat, just to the outside of the lift control lever. Move the tilt control lever forward to tilt the forks forward. Move the lever backward to tilt the forks backward.



1 Handbrake lever
2 Fuel indicator
3 Choke control
4 Engine temperature indicator
5 Horn button
6 Steering handwheel
7 Direction shift lever
8 Hour meter
9 Engine oil pressure gage
10 Light switch
11 Ammeter
12 Transmission oil temperature light
13 Starter and ignition switch
14 Tilt control lever
15 Lift control lever
16 Accelerator pedal
17 Brake pedal
18 Inching pedal

Figure 5. Location of operating controls and instruments.

k. Direction Shift Lever. The direction shift lever (7, fig. 5) is located on the right side of the steering column. Move the direction shift lever forward to the F (forward) position to allow the truck to move forward. Move the lever back to the R (reverse) position to allow the truck to move in reverse. Leave the lever in the N (neutral) position when the truck is parked.

Note. The direction shift lever must be in the N (neutral) position in order to start the engine. The lever must not be shifted while the truck is in motion.

l. Brake Pedal. The brake pedal (17, fig. 5) is located on the floor to the right of the steering column. Depress the brake pedal to stop the travel of the truck during operation. When the brake pedal is depressed, the stoplight will glow.

m. Inching Control Pedal. The inching control pedal (18, fig. 5), located on the floor to the left of the steering column, allows smooth maneuvering of the truck when high engine speeds are necessary to perform lifting or tilting operations. Depress the inching control pedal to actuate the control valve, thus reducing the hydraulic pressure against the piston of the engaged clutch. This slows the transmission gear speed without affecting the engine speed and provides delicate control of the truck for traveling or inching. Further depression of the inching pedal will reduce pressure on the clutch

plates to the extent that the gear rotation will be completely stopped and will also actuate the wheel brake.

n. Seat Adjuster Assembly. An adjuster assembly (fig. 6) is located under the operator's seat. Move the adjuster lever toward the right and move the seat forward or backward as desired. Release the adjuster lever to lock it.

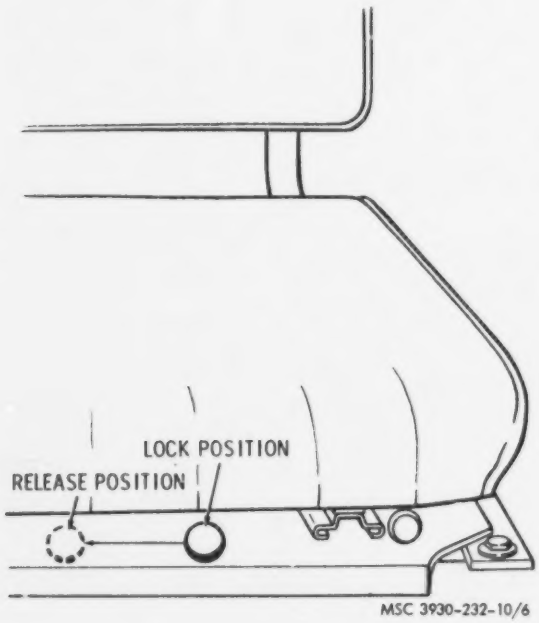


Figure 6. Adjusting seat position.

12. Instruments

a. Hour Meter. The hour meter (8, fig. 5) is located to the right of center on the instrument panel. This meter indicates the total number of hours that the engine has been in operation. The red figures (extreme right) record 10ths of an hour. The small indicator (upper left) turns when the meter is recording.

b. Fuel Indicator. The fuel indicator (2, fig. 5) is located to the extreme left on the instrument panel. This indicator registers the amount of gasoline in the fuel tank. The indicator dial is marked E, ½, and F. These symbols indicate that the fuel tank is either empty, one-half full, or full. The starter and ignition switch must be in the IGN position to activate the fuel indicator.

c. Ammeter. The ammeter (11, fig. 5) is located to the extreme right on the instrument panel. The ammeter indicates the amount of current flowing to or being drawn from the battery. When the engine is started, the ammeter needle should move far to the right side of the dial and should fall back gradually to a position near the center or slightly to the charge (+) side of the dial. If the ammeter needle shows a constant discharge (—), stop the engine and report this trouble to the proper authority.

d. Engine Oil Pressure Gage. The engine oil pressure gage (9, fig. 5) is located on the instrument panel, at the left of the ammeter. This gage indicates the working pressure of the engine lubricating oil while the engine is in operation. An indication over 30 psi immediately after starting a cold engine is normal. It should indicate 5 to 10 psi at idling speed and 25 to 30 psi at normal operating speed. If the pressure reading is low or excessively high, stop the engine and report this trouble to the proper authority.

e. Engine Temperature Indicator. The engine temperature indicator (4, fig. 5) is located on the instrument panel, at the right of the fuel indicator gage. The indicator registers the temperature of the engine coolant in degrees Fahrenheit (F.). During operation, the indicator should register 160° to 180° F. If the indicator fails to show any temperature gain after the engine has been operated for a reasonable length of time, or if the needle registers above 200° F., stop the engine and report the trouble to the proper authority.

f. Transmission Oil Temperature Light. The transmission oil temperature light (12, fig. 5) is located on the instrument panel, above and to the right of the ammeter. This light will glow red when the oil temperature in the transmission is high. If the light glows, stop the engine immediately and report the trouble to the proper authority.

Section III. OPERATION UNDER USUAL CONDITIONS

13. General

A person selected to operate this forklift truck must be an experienced operator of materials handling equipment or heavy-duty equipment. In addition, each operator must undergo a thorough training program to acquaint him with the specific operating characteristics of this truck.

14. Starting the Truck

a. Pull back on the handbrake lever (par. 11*d*) to make certain the truck will remain in a stationary position while it is being started.

b. Make certain the direction shift lever (par. 11*k*) is in N (neutral) position.

c. At initial starting or if the engine is cold, pull the choke control (par. 11*b*) all the way out.

d. Press down on the accelerator pedal (par. 11*f*) approximately one-third the distance from its normal raised position.

e. Turn the starter and ignition switch (par. 11*a*) to START position. The starter motor will crank the engine. When the engine starts, release the switch and it will automatically return to IGN (ignition) position.

***Caution:* Do not operate the starter continuously for more than 30 seconds. If the engine does not start after 30 seconds, allow the starter motor to cool for at least 2 minutes before attempting to start the engine again.**

f. Hold the accelerator pedal steady and allow engine to warm up at a fast idling speed. Immediately observe the engine oil pressure gage (par. 12*d*) and ammeter (par. 12*c*) for normal readings. Also observe transmission oil temperature light (par. 12*f*) for indications of trouble. (If the light glows red, shut off the engine and report this to the proper authority.) As the engine begins to warm up, gradually push in the choke control. As soon as the engine is warm, push the choke control all the way in.

g. Warm the engine until it will idle smoothly with the choke control pushed all the way in. Check for proper readings on the ammeter (par. 12*c*), engine oil pressure gage (par. 12*d*), engine temperature indicator (par. 12*e*), and fuel indicator (par. 12*b*). Be sure the hour meter (par. 12*a*) is operating properly.

h. Remove foot pressure from the accelerator pedal. Report any malfunctions to the proper authority.

15. Driving the Truck

a. Move the lift control lever (par. 11*i*) to the rear and raise the forks to normal traveling position, (approx. 8 to 10 in. above the working surface).

b. Move the tilt control lever (par. 11*j*) backward and tilt forks backward.

c. Move the direction shift lever (par. 11*k*) from N (neutral) position to F (forward) or R (reverse) position, depending upon the desired direction of travel.

d. Place foot on the accelerator pedal, and release the parking brake lever. Gradually depress accelerator pedal until the truck begins to travel. Continue to depress the accelerator pedal until safe operating speed is attained. If the truck fails to move, shut off the engine immediately and report this to the proper authority.

16. Picking up the Load

a. Approach the load squarely and halt the truck. Move the tilt control lever (par. 11*j*) forward and bring the mast assembly to the vertical position. Raise or lower the forks to the proper height to pick up the load.

b. Move the truck forward until the forks are positioned under the load. Make certain the forks are fully inserted in the pallet or under the load.

c. Apply the handbrake to prevent the truck from shifting position during the lifting operation.

d. Move the direction shift lever (par. 11*k*) to N (neutral) position.

e. Move the lift control lever (par. 11*i*) to the rear and accelerate the engine to raise the load approximately 12 inches above ground level. Release the lift control lever. Move the tilt control lever backward to tilt the forks backward. Release the lever and decelerate the engine.

f. Move direction shift lever (par. 11*k*) from N (neutral) position to the proper position for the desired direction of travel.

g. Release the handbrake lever, depress the accelerator pedal, and move load to desired location.

17. Depositing the Load

a. Depositing the Load on a Tiered Stack.

(1) Move the lift control lever to the rear and accelerate the engine until the load reaches the desired height above the tier.

(2) Drive the truck forward until the load is above its resting place. To slowly maneu-

ver the truck forward while high engine speed is needed, use the inching pedal (par. 11*m*). Depress the brake pedal to halt the truck.

(3) Pull back on the handbrake lever to apply the parking brake.

(4) Move the direction shift lever to N (neutral) position. Move the tilt control lever forward and tilt the forks forward until the load is aligned with the tier.

(5) Move the lift control lever forward and carefully lower the load into position on the tier. Continue to lower the forks until they can be easily withdrawn from the pallet.

(6) Move the direction shift lever to R (reverse) position. Release the handbrake lever, and slowly back the truck away from the tiered stack until the forks are clear.

(7) Move the lift control lever forward to lower the forks into normal traveling position (8 to 10 in. above the surface).

b. Depositing the Load in a Storage Area.

(1) Carefully drive up to the position at which the load is to be deposited. Depress the brake pedal to halt the truck.

(2) Apply the handbrake, and move the direction shift lever to N (neutral) position.

(3) Move the tilt control lever forward and bring the mast assembly to the vertical position.

(4) Move the lift control lever forward and carefully lower the load to the ground. Continue to lower the forks until they can be easily withdrawn from under the load.

(5) Move the direction shift lever to R (reverse) position. Release the handbrake lever, and slowly back the truck away from the deposited load.

18. Stopping the Truck

a. Remove foot from the accelerator pedal.

b. Gradually depress the brake pedal to stop travel of the truck. Avoid sudden stops.

c. Apply the handbrake. Move the direction shift lever to N (neutral) position.

d. Move the tilt control lever forward to bring the mast to vertical position.

e. Move the lift control lever forward to lower the forks to the ground.

f. Turn the starter and ignition switch to OFF position to stop the engine.

Section IV. OPERATION OF EQUIPMENT USED IN CONJUNCTION WITH THE TRUCK

19. General

This section contains instructions for operating the portable fire extinguisher (fig. 7) that is supplied with the truck.

20. Operating the Extinguisher

a. Disconnect the clamp that secures the extinguisher to its mounting bracket, swing the clamp open, and remove the extinguisher.

b. Hold the extinguisher upright and raise the large locking handle to break the seal.

c. Aim the nozzle at the base of the fire and depress the small operating lever with the thumb.

d. Direct the discharge at the base of the fire with a side-to-side sweeping motion.

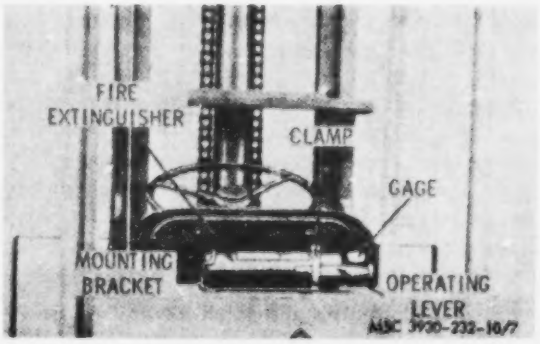


Figure 7. Portable fire extinguisher, installed view.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

Section I. SPECIAL TOOLS AND EQUIPMENT

21. Special Tools

There are no special tools necessary for the operation or first-echelon maintenance of this truck.

22. Equipment

The items of equipment supplied with this truck are listed in the basic issue item list (app. II).

Section II. LUBRICATION

23. General

The lubrication of this truck is the responsibility of the using organization and will be performed by second-echelon personnel.

24. Operator Responsibilities

The operator will be alert to detect signs of vehicle malfunctioning from lack of lubrication. He will report these conditions immediately to the proper authority.

Section III. PREVENTIVE MAINTENANCE SERVICES UNDER USUAL CONDITIONS

25. General

To insure that the truck is ready for operation at all times, it must be inspected systematically, so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance services to be performed are listed and described in paragraph 26. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the truck will be noted for future correction, to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment were operation continued. All deficiencies and shortcomings will be recorded with the corrective action taken on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) at the earliest possible opportunity.

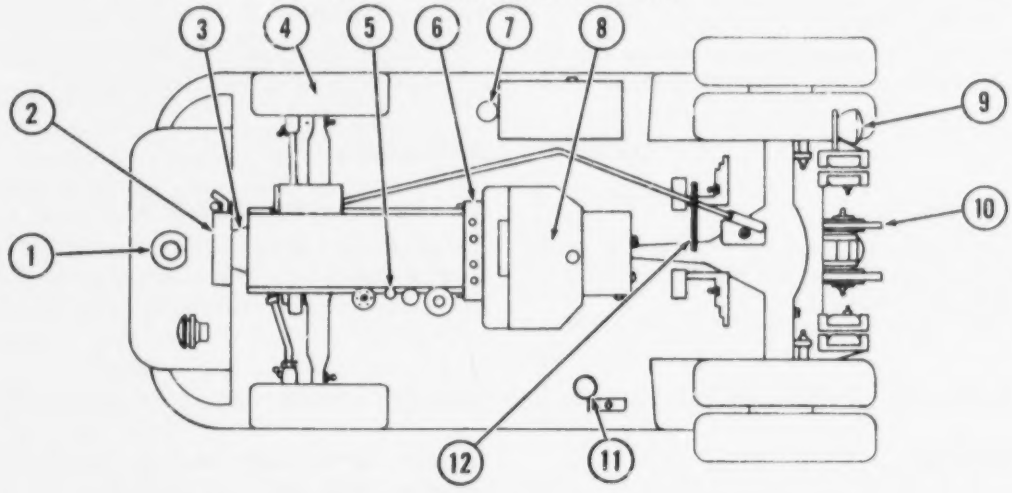
26. Daily Preventive Maintenance Services

This paragraph contains an illustrated tabulated listing of preventive maintenance services which must be performed by the operator. Refer to figure 8 for the daily preventive maintenance services

PREVENTIVE MAINTENANCE SERVICES

DAILY

TM10-3930-232-10 — ALLIS CHALMERS MODEL FP60-24PS — FORK LIFT TRUCK



LUBRICATE IN ACCORDANCE WITH CURRENT LUBRICATION ORDER

ITEM		PAR REF
1	RADIATOR. Check level, add coolant as required.	
2	FIRE EXTINGUISHER. Inspect for broken seal.	
3	BELTS. Inspect fan and generator belts for frayed condition, deterioration, and proper adjustment. The belts should deflect about one-half inch when finger pressure is applied midway between the pulleys. (Weekly)	
4	TIRES. Inspect tires for unusual wear, cuts, and the presence of foreign objects. Check tires for proper inflation of 85 psi in front (drive) and 85 psi in rear (steering) wheels.	
5	ENGINE. Check oil level, fill as required. Reference L.O.	
6	BATTERY. Check the level of electrolyte in battery. Electrolyte should be one-half inch above plates. Inspect battery case for cracks and leaks. Inspect battery terminals and cables for secure mounting and deterioration. Have specific gravity of electrolyte checked. Clean battery case as necessary. (Weekly)	
7	HYDRAULIC OIL TANK. Check for proper level. (Weekly)	

MSC 3930-232-10/8 (1)

Figure 8. Daily preventive maintenance services.

ITEM		PAR REF
8	TRANSMISSION. Check oil level, fill as required. Reference L.O. (Weekly)	
9	LIGHTS. Check all lights to be sure they operate properly.	
10	LIFT CHAINS. Inspect for cracked, broken, or excessively worn links. (Weekly)	
11	FUEL TANK. Check level of fuel in fuel tank. Add fuel as required.	
12	CONTROLS AND INSTRUMENTS. With truck running, check for improper operation. Normal operating readings for instruments are: Ammeter — Slight positive charge Hourmeter — Indicates total hours of operation Oil pressure gage — 25 to 30 psi Temperature gage — 160° to 180°F	

MSC 3930-232-10/8 (2)

Figure 8—Continued

Section IV. PREVENTIVE MAINTENANCE SERVICES UNDER UNUSUAL CONDITIONS

27. General

When the truck is operated under unusual conditions, extra care must be taken to maintain the truck in good operating condition. Certain additional services must be performed, and some of the regular preventive maintenance services must be performed more often.

28. Operation in Extreme Heat

a. Cooling System.

(1) Check the fan belt more often to be sure it deflects properly. The belt should deflect one-half inch when finger pressure is applied midway between the pulleys.

(2) Check the coolant level more often, maintaining the level at the bottom of the fillercap neck. Be sure the radiator cap is secure.

(3) Keep external parts of the radiator clean and free of foreign matter to insure good air circulation.

(4) Have the cooling system flushed and cleaned frequently.

b. Electrical System. Check the battery electrolyte level more often, maintaining the level one-half inch above the plates. Have the specific gravity of the electrolyte checked more often.

29. Operation in Extreme Cold

a. Shelter. Store the truck in a heated building or in a shelter, if possible. If a shelter is not available, park the truck with the front end facing into the wind and cover the truck with a tarpaulin.

b. Cooling System. If the truck is to be at rest for an appreciable length of time and antifreeze is not available, have the cooling system drained when the temperature is likely to be 30° F. or lower. Attach a tag to the steering handwheel to warn personnel that the cooling system has been drained.

c. Electrical System.

(1) Have the specific gravity of the battery electrolyte checked more often.

(2) Do not add water to the battery unless the engine is to be operated immediately.

(3) Have the battery removed and stored in a warm place if the truck is not parked in a shelter.

30. Operation on Sandy Terrain

a. Take precautions to prevent sand and dust from entering the fuel system. Have a bag made of single-layer cloth and loosely tie it over the entire air cleaner during sandstorms. Have the air cleaner and fuel filter bowl cleaned daily.

b. Be sure to remove sand from axles, wheels, steering spindles, radiator, and brake assemblies.

c. Protect the lift and tilt mechanisms from sand. During sandstorms, cover exposed parts of the lift and tilt cylinder piston rods.

31. Operation in Tropical Areas

In tropical areas, corrosive action will take place almost immediately where paint is chipped or scratched from the truck. Inspect the truck often for signs of defective paint, and report this condition to the proper authority.

Section V. TROUBLESHOOTING

32. Definition

Troubleshooting is the process of locating and correcting malfunctions that may occur under normal operating conditions, and it is the responsibility of the using organization.

33. Operator Responsibilities

The operator will report to the proper authority any deficiencies noted before, during, or after operation. Report any strange noises or subnormal operation immediately and as accurately as possible.

CHAPTER 4

DEMOLITION OF TRUCK

34. Authority

The truck will be destroyed only if there is danger of capture and use by the aggressor, and only after the order is given by the unit commander. Destroy the same parts on all similar equipment to prevent salvage by the aggressor.

35. Methods

***Warning:* Observe adequate safety precautions.**

a. Destruction by Hand.

(1) Smash the items listed below with a sledge, a hammer, or an ax.

(*a*) controls
(*b*) valves
(*c*) hydraulic cylinders
(*d*) hydraulic pump
(*e*) carburetor
(*f*) manifold
(*g*) generator
(*h*) distributor
(*i*) ignition coil
(*j*) spark plugs
(*k*) battery

(2) Smash the items listed below by using a heavy hammer to drive a pointed steel bar into the parts.

(*a*) engine
(*b*) drive axle and differential
(*c*) gear housing
(*d*) steering gear housing
(*e*) radiator
(*f*) oil and fuel tanks

(3) Destroy the items listed below by cutting them or ripping them out.

(*a*) wires
(*b*) cables
(*c*) lines

b. Destruction by Misuse.

(1) Drain the crankcase and radiator, disconnect the radiator fan, and run the engine at full throttle.

(2) Place sand, gravel, nuts, bolts, screws, or broken glass in the fuel tank.

(3) Pack cloths saturated with gasoline around the engine and inside the truck, and set the cloths afire.

(4) Remove the carburetor, the generator, and the distributor and bury them in the ground or throw them into a body of water.

APPENDIX I

REFERENCES

AR 320–5	Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations and Brevity Codes.
AR 600–55	Motor Vehicle Driver Selection, Testing and Licensing.
SM 10C9100–SL	Petroleum, Petroleum-Base Products and Related material.
AR 750–5	Organization, Policies and Responsibilities for Maintenance Operation.
DA Pam 108–1	Index of Army Motion Pictures, Film Strips, Slides and Phono-Recordings.
DA Pam 310–1	Military Publications: Index of Administrative Publications.
DA Pam 310–2	Military Publications: Index of Blank Forms.
DA Pam 310–3	Military Publication: Index of Doctrinal, Training, and Organizational Publications.
DA Pam 310–4	Military Publications: Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 4, 6, 7, 8, and 9) Supply Bulletins, Lubrication Orders, and Modification Work Orders.
DA Pam 310–5	Index of Graphic Training Aids and Devices.
FM 5–25	Explosive and Demolition.
FM 21–5	Military Training.
FM 21–6	Techniques of Military Instruction.
FM 21–30	Military Symbols.
TM 21–300	Driver Selection and Training (Wheeled Vehicles).
TM 38–750	The Army Equipment Record System and Procedures.

APPENDIX II

BASIC ISSUE ITEMS LIST AND MAINTENANCE AND OPERATING SUPPLIES

Section I. INTRODUCTION

1. General

Section II lists the accessories, tools, and publications required in 1st echelon maintenance and operation, initially issued with, or authorized for the Army Model MHE-183 Fork Lift Truck. Section III lists the maintenance and operating supplies required for initial operation.

2. Explanation of Columns Contained in Section II

a. Source Codes. The information provided in each column is as follows:

(1) *Materiel.* This column lists the basic materiel code number of the supply service assigned responsibility for the part. Blank spaces denote supply responsibility of the preparing agency. General Engineer supply parts are identified by the letters GE in parentheses, following the nomenclature in the description column. Other basic materiel code numbers are—

5—Engineer Materiel
9—Ordnance Materiel
10—Quartermaster Materiel
11—Signal Materiel
12—Adjutant General

(2) *Source.* The selection status and source of supply for each part are indicated by one of the following code symbols:

(*a*) P—applied to high-mortality repair parts which are stocked in or supplied from the supply service depot system, and authorized for use at indicated maintenance echelons.

(*b*) P1—applied to repair parts which are low-mortality parts, stocked in or supplied from technical service depots, and authorized for installation at indicated maintenance echelons.

(*c*) M—applied to repair parts which are not procured or stocked but are to be manufactured at indicated maintenance echelons.

(*d*) X2—applied to repair parts which are not stocked. The indicated maintenance echelon requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

(3) *Maintenance.* The lowest maintenance echelon authorized to use, stock, install, or manufacture the part is indicated by the following code symbol:

O—Organizational Maintenance (1st and 2d Echelon)

(4) *Recoverability.* Repair parts and/or tool and equipment items that are recoverable are indicated by one of the following code symbols:

(*a*) R—applied to repair parts and assemblies which are economically repairable at field maintenance facilities (3d and 4th echelons) and normally are furnished by supply on an exchange basis.

(*b*) T—applied to higher-dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance facilities.

(*c*) U—applied to repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, high-dollar value reusable casings, castings, and the like.

Note. When no code is shown in the recoverability column the part is considered expendable.

b. Federal Stock Numbers. The Federal stock number will be shown in the column, and will be used for requisitioning purposes.

c. Description.

(1) The item name and a brief description of the part are shown.

(2) A five-digit Federal supply code for manufacturers and/or other technical services is shown in parentheses followed by the manufacturer's part number. This number will be used for requisitioning purposes when no Federal stock number is indicated in the Federal stock number column.
Example: (08645) 86453.

(3) The letters GE, shown in parentheses immediately following the description, indicates General Engineer supply responsibility for the part.

d. Unit of Issue. If no abbreviation is shown in this column, the unit of issue is "each".

e. Quantity Issued with Equipment. This column lists the quantities of repair parts, accessories, tools, or publications that are initially issued with each item of equipment. Those indicated by an asterisk are to be requisitioned through normal supply channels as required.

f. Illustrations. This column is subdivided into two columns which provide the following information:

(1) *Figure number.* Provides the identifying number of the illustration.

(2) *Item number.* Provides the referenced number for the parts shown in the illustration.

3. Index to Federal Supply Code for Manufacturers

09367 ..... Allis-Chalmers Mfg. Co., Harvey Works

4. Explanation of Columns Contained in Section III

a. Item. This column contains numerical sequenced item numbers, assigned to each component application, to facilitate reference.

b. Component Application. This column identifies the component application of each maintenance or operating supply item.

c. Source of Supply. This column lists the basic materiel code number of the supply service assigned responsibility for the item. Blank spaces denote supply responsibility of the preparing agency. Other basic materiel code numbers are—

9—Ordnance Materiel
10—Quartermaster Materiel
11—Signal Materiel
12—Adjutant General
55—Transportation Materiel

d. Federal Stock Number. The Federal stock number will be shown in this column and will be used for requisitioning purposes.

e. Description. The item and a brief description are shown.

f. Quantity Required for Initial Operation. This column lists the quantity of each maintenance or operating supply item required for initial operation of the equipment.

g. Quantity Required for 8 Hours of Operation. Quantities listed represent the estimated requirements for an average 8 hours of operation.

h. This column contains informative notes keyed to data appearing in the preceding column.

Section II. BASIC ISSUE ITEMS LIST

Source codes				Federal stock No.	Description	Unit of issue	Expendability	Quantity issued with equipment	Illustrations	
Material	Source	Maintenance	Recoverability						Fig. No.	Item No.
					EQUIPMENT					
11	P1	O	.....	6140-264-5446	BATTERY, storage, 12-volt	ea	.....	1		
9	P1	O	.....	6810-249-9354	ACID, sulfuric, electrolyte dilute, specific gravity 1.280, 1-gallon container.	ea	.....	1		
5	P1	O	.....	4210-893-1092	EXTINGUISHER, fire	ea	.....	1	7	1
10	X2	O	.....	.....	FORK ASSEMBLY (09367)	ea	.....	2	1	4
10	P1	O	.....	7520-559-9618	CASE, MAINTENANCE AND OPERATIONAL MANUAL.	ea	.....	1		
					PUBLICATIONS					
12	.....	.....	.....	.....	TM 10-3930-232-10 (Operator's Manual)	ea	.....	1		

Source codes				Federal stock No.	Description	Unit of issue	Expendability	Quantity issued with equipment	Illustrations	
Material	Source	Maintenance	Recoverability						Fig. No.	Item No.
					REPAIR PARTS Non authorized for first-echelon maintenance. SPECIAL TOOLS None authorized for first echelon maintenance. RECORDS EQUIPMENT LOGBOOK Consisting of the following forms: 2408, 2408-1, 2408-2, 2808-3-1, 2408-5, 2408-6, 2408-7, 2408-8, 2408-10, 2408-11, and logbook binder.					

Section III. MAINTENANCE AND OPERATING SUPPLIES

Item	Component application	Source of supply	Federal stock No.	Description	Quantity required for initial operation	Quantity required for 8 hours operation	Notes
1	CRANKCASE (1)			OIL, LUBRICATING: 5-gallon drum as follows:			(1) Includes quantity of oil to fill engine oil system as follows:
		10	9150-231-6653	Grade 9250	7½ qt.		
		10	9150-265-9435	OE-30			6 qt crankcase
		10	9150-231-9037	Grade 9110			½ qt air cleaner
		10	9150-265-9428	OE-10			1 qt—oil filter
		10	9150-242-7603	OES			
2	AIR CLEANER (2)			OIL, LUBRICATING (2)			
3	TRANSMISSION.	10	9150-265-9428	OE-10	10 qt		(2) Use oil as prescribed in (1) above.
4	HYDRAULIC TANK (3).	10	9150-265-9428	OE-10			
		10	9150-242-7603	OES			
5	HYDRAULIC BRAKE SYSTEM.			OIL HYDRAULIC 1 gal can as follows:			
		10	9150-231-9071	HB Nonpetroleum, automotive.	1 pt		(3) Includes quantity of oil to fill hydraulic system as follows:
		10	9150-252-6375	HBA Nonpetroleum automotive, Artic-type			
6	FUEL TANK			GASOLINE: Bulk as follows:			7.5-gal—tank 3 qt—filters and lines.
		10	9130-264-6218	Regular Grade 70-75	14.5 gal		
7	RADIATOR			WATER:	16 qt		
		9	6850-243-1992	ANTIFREEZE: Ethylene-glycol, 1-gal can.			
		9	6850-243-1990	ANTIFREEZE: Ethylene-glycol, 55-gal—drum.			
8	DIFFERENTIAL AND PLANETTARY GEARS (6).			OIL, LUBRICATING: 5-gal drum as follows:			(4) Quantities as follows: Differential—15 pt Planetary Gears—4 pt ea.
		10	9150-577-5844	GO-90			
		10	9150-257-5440	GOS	(6)		
9	GENERAL	10	9150-231-9064	PL-LIGHT, LUBRICATING OIL, preservative, 1 qt can.			
		10	9150-231-9065	PL-LIGHT, LUBRICATING OIL, Preservative, 1-gal can.			
10	GENERAL APPLICATION	10	9150-190-0905	GAA, GREASE, AUTOMOTIVE and Artillery 5-lb can.			
		10	9150-190-0907	GAA, GREASE, AUTOMOTIVE and Artillery 35-lb can.			

By Order of the Secretary of the Army:

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Chief of Staff.

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NG: None.
USAR: None.
For explanation of abbreviations used, see AR 320-50.

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